REMARKS

These remarks are in response to the Final Office Action dated September 16, 2003, which has a shortened statutory period for response set to expire December 16, 2003. No extension of time is required.

Specification

The specification is amended to correct a minor typographical error. No new matter is added.

Claims

Claims 1-8, 10-15, and 17-20 are pending in the above-identified application. Claims 1-8, 10-15, and 17-20 are rejected over prior art. Claims 1, 8, and 15 are amended and Claims 9 and 16 are re-instated after being previously canceled. Claims 2-4, 6, 9-14, and 16-20 remain as filed. Reconsideration is requested.

Interview Summary

An interview between Applicant's Attorney and the Examiner was held on November 6, 2003, during which the rejections of Claims 1, 8, and 15 over the prior art of record were discussed. Applicant pointed out that the Stephenson reference does not teach or suggest protection of semiconductor junctions in the underlying chip from exposure to light. As indicated in the current office action (page 5, first paragraph), the Examiner's position was that the current claims do not clearly recite this limitation. The Examiner and Applicant's attorney discussed particular claim language to clarify this distinction, and agreed that the amendments made herein to Claims 1 and 8 overcome the rejections based on the prior art of record. It was also agreed that similar amendments to Claim 15 would distinguish the prior art of record, but no particular language was discussed. The Examiner further indicated that an additional search may be required prior to allowance of the case, and Applicant's attorney agreed to file a Request For Continued Examination (filed herewith) to provide the Examiner an opportunity to take any further necessary action on this case.

Rejections Under 35 U.S.C. § 102

Claims 8, 10, 11, 13-15, 17, 19, and 20 are rejected under 35 U.S.C. § 102 (b) as being anticipated by Stephenson (U.S. 6,025,952). The Examiner writes (in part):

> "Stephenson discloses and shows in FIG. 4a, an LCD array having a plurality of imaging surfaces (80) arranged in rows and columns with gaps there between, an improvement comprising:
> a plurality of traces (16, 28) arranged such that the gaps are generally underlain by the traces such that light passing through the gaps is blocked by the traces (col. 5, lines 23-27).
> Accordingly, claims 8 and 13 are anticipated."

Applicant respectfully requests reconsideration in view of the amendments made herein.

The standard for anticipation is set forth in M.P.E.P. § 2131 as follows:

> "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." Richardson v. Suzuki Motor Co., 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Claim 8

As amended herein, Claim 8 recites:

> 8. In a reflective LCD array having a plurality of imaging surfaces arranged in rows and columns with gaps there between and an underlying circuitry layer, an improvement comprising:
> a plurality of traces between said circuitry layer and said imaging surfaces and arranged such that said gaps are generally underlain by said traces such that light passing through said gaps is blocked by said traces and thereby prevented from impinging on said circuitry layer.

Claim 8 is amended to include the language that was agreed upon in the interview held between Applicant's attorney and the Examiner. Stephenson does not teach or suggest an underlying circuitry layer or a plurality of traces between the circuitry layer and the imaging surfaces that prevent light from impinging on the circuitry layer, as recited in amended Claim 8.

Because Stephenson does not teach or suggest all the limitations of Claim 8, Stephenson does not anticipate Claim 8.

Claims 10, 11, and 13-14 depend either directly or indirectly from amended Claim 8 and are therefore distinguished from the cited prior art for at least the reasons provided above with respect to Claim 8.

Claim 15

As amended herein, Claim 15 recites:

> 15. A method for blocking light from impinging on a circuitry layer of a reflective LCD array having a plurality of imaging surfaces, said method comprising:
>
> arranging a first plurality of traces on a first metal layer between said circuitry layer and said imaging surfaces such that said first plurality of traces blocks light coming through a first plurality of spaces in the array, which would impinge on said circuitry layer; and
>
> arranging a second plurality of traces on a second metal layer between said circuitry layer and said imaging surfaces such that said second plurality of traces blocks light coming through a second plurality of spaces in the array, which would impinge on said circuitry layer.

No specific amendment language for Claim 15 was discussed during the Examiner interview. However, it was agreed that Claim 15 should be amended similar to Claim 1 or Claim 8. Claim 15 is amended herein to recite that the first and second pluralities of traces block light "which would impinge on said circuitry layer." Stephenson does not teach or suggest an LCD having a circuitry layer and a plurality of imaging surfaces, nor does Stephenson disclose a first or second plurality of traces between a circuitry layer and imaging surfaces that prevent light from impinging on the circuitry layer, as recited in amended Claim 15. Because Stephenson does not teach or suggest all the limitations of Claim 15, Stephenson does not anticipate Claim 15.

Claims 17, 19, and 20 depend either directly or indirectly from amended Claim 15 and are therefore distinguished from the cited prior art for at least the reasons provided above with respect to Claim 15.

For the above reasons Applicant requests reconsideration and withdrawal of the rejections under 35 U.S.C. § 102.

Rejections Under 35 U.S.C. § 103

Claims 1-7, 12, and 18 are rejected under 35 U.S.C. § 103 as being unpatentable over Stephenson. The Examiner writes (in part):

> "As to claims 1-3, 12 and 18, Stephenson discloses all the limitations as claimed except that the imaging surfaces are mirror surfaces. However, it is common and known in the art to use reflective pixel electrodes to obtain a reflective display. Further, it is also known in the art that reflective pixel electrodes have mirror surfaces. Therefore, it would have at least been obvious to one of ordinary kill in the art at the time of the invention was made to modify the LCD array of Stephenson such that use reflective pixel electrodes (mirror surfaces) so that a reflective display is obtained."

Applicant respectfully requests reconsideration in view of the amendments made herein.

M.P.E.P. §2143 sets forth the requirements of a *prima facie* case of obviousness:

> To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

Claim 1

As amended herein, Claim 1 recites:

1. A light reflective LCD array, comprising:

a plurality of mirrors arrayed in a plurality of rows and a plurality of columns such that there are horizontal gaps between the rows and vertical gaps between the columns;

a first metal layer having a first plurality of power traces arrayed generally horizontally such that said first plurality of power traces generally underlies said horizontal gaps;

a second metal layer having a second plurality of power traces arrayed generally vertically such that said second plurality of power traces generally underlies said vertical gaps; and

at least one circuitry layer underlying said first and said second metal layers; and wherein

said first and said second metal layers prevent light from impinging on said circuitry layer, and said first plurality of power traces and said second plurality of power traces are power routing busses.

Claim 1 is amended herein to include the language agreed upon in the Examiner's interview. Claim 1 now includes the limitations "at least one circuitry layer" and wherein "said first and said second metal layers prevent light from impinging on said circuitry layer."

Stephenson does not teach or suggest "at least one circuitry layer underlying said first and said second metal layers," and "said first and second metal layers prevent light from impinging on said circuitry layer," as recited by amended Claim 1. Further, Stephenson does not teach or suggest "a plurality of mirrors" having "horizontal gaps" and "vertical gaps" therebetween. Because Stephenson does not teach or suggest all the limitations of Claim 1, no prima facie case of obviousness is established with respect to amended Claim 1.

Furthermore, there is no motivation in the Stephenson reference itself or in the knowledge of one skilled in the art to modify the reference to obtain the claimed invention, because Stephenson is directed to transmissive displays, which are not formed on semiconductor chips and which do not include the same type of underlying circuitry layers as reflective displays. Indeed, in transmissive displays, light passes completely through the display. Because the device of Stephenson does not include an underlying circuitry layer, there is no motivation to provide a means to protect semiconductor junctions of a nonexistent circuitry layer from light.

Because there is no suggestion or motivation to modify the device of Stephenson to obtain Applicant's claimed invention, no prima facie case of obviousness is established with respect to amended Claim 1.

Claims 2-7 depend either directly or indirectly from Claim 1 and are distinguished from the cited prior art for at least the reasons provided above with respect to amended Claim 1.

Claim 12

Claim 12 depends directly from Claim 8, which includes the limitation "an underlying circuitry layer." Therefore, for at least the same reasons provided above with respect to Claim 1, no prima facie case of obviousness is established with respect to Claim 12.

Claim 18

Claim 18 depends directly from Claim 15, which includes the limitation of "a circuitry layer." Therefore, for at least the same reasons provided above with respect to Claim 1, no prima facie case of obviousness is established with respect to Claim 18.

For the above reasons Applicant requests reconsideration and withdrawal of the rejections under 35 U.S.C. § 103.

Claims 9 and 16

The limitations of Claims 9 and 16 were amended into Claims 8 and 15, respectively, in the previous office action. In view of the current amendments, such limitations would now unnecessarily limit the scope of Claims 8 and 15. Therefore, the limitations of Claims 9 and 16 are removed from Claims 8 and 15, respectively, and Claims 9 and 16 are reinstated as originally filed. Claims 9 and 16 should be allowable over the prior art of record for at least the reasons set forth above with respect to Claims 8 and 15. No new matter is added.

For the foregoing reasons, Applicant believes Claims 1-20 are in condition for allowance. Should the Examiner undertake any action other than allowance of Claims 1-20, or if the Examiner has any questions or suggestions for expediting the prosecution of this application, the Examiner is requested to contact Applicant's attorney at (269) 279-8820.

Respectfully submitted,

Date: 12/16/03

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CERTIFICATE OF MAILING (37 CFR 1.8(A))

I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: MS RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date: 12/16/03

Larry E. Henneman, Jr.